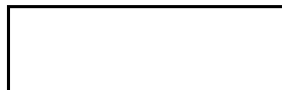
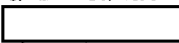


STAT



19 Jan 1966

Sounds like you can get some meaningful results from this study. All the fat has been pared off, and the problems are now well defined. I have no idea where the money's coming from, but that's your problem.

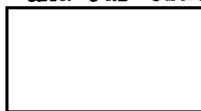
Item 4, dealing with vibration, has a somewhat parallel effort in our laboratory.  is now looking into vibration in nearly all aspects as they apply to this Center. He is doing this in response to a requirement from PAG and because we also feel it is of sufficient importance in other areas to devote a fairly large share of Vic's time to the problem. There is no duplication, it the results of Wil's efforts ought to be correlated with Vic's, and vice versa.

STA

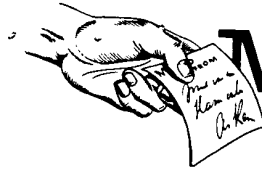
I consider Items 7 and 5 to be of paramount importance for our long-range interests, and would suggest that if the contract is let, work begin as soon as possible on these areas to divulge any contributions we might make in the lab. If so, Wil could slack-off and work on another Item while we filled-in those areas he might require.

In any event, Wil and Vic (and I) should pool our results so that we get the most out of his and our efforts.

STAT



Declass Review by NGA.



Memo from

[Redacted]

[Redacted]

What is your
feeling on going
ahead with this

JR

STAT

STA

19/66

STAT

January 5, 1966

STAT

[redacted]
P. O. Box 8843
Southwest Station
Washington, D. C. 20024

Subject: Revised proposal for addition of Task III to
Contract [redacted]

STAT

Reference: SSC letter dated October 4, 1965 "Proposal
for Increase in Scope of Contract [redacted]"

STAT

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Dear Sir:

In the referenced letter, we proposed for your consideration an increase in scope of the subject contract by the addition of Task III "Analysis and Test of Viewing and Monocation Equipment."

The proposed work statement and proposed change in scope have been discussed with your Technical Staff and revisions are submitted herewith which conform to the results of the discussions. Enclosure (a) is the "Revised Proposed Level of Effort" and Enclosure (b) is the "Revised Proposed Work Statement" of the proposed Task III. To implement the change we propose the contract funds be increased by [redacted] for support through 30, June, 1966.

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No change is proposed in the terms and conditions of the present contract except for direct material, purchased parts and subcontracts. It is proposed that the present contract be changed to provide a 12% materials, purchased parts and subcontract handling charge.

No change is proposed for other direct costs, i.e. travel, shipping and computer rental, which are billed at net cost.

STAT

January 5, 1966

The proposed work is of a continuing nature and it is anticipated that the specific priority and phasing would be directed by the Technical Representative of the Contracting Officer. Monthly progress reports and technical reports and test reports will be submitted as required.

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[redacted] is pleased to submit this proposal. We believe we can offer you strong technical support as the proposed work is within our particular area of technical competence. We also believe that our extensive knowledge of the equipment and equipment problems uniquely qualifies us to perform the work proposed.

Very truly yours,

STAT

cc: Technical Representative of
Contracting Officer

Enclosure (a) Revised proposed level of effort
Enclosure (b) Revised proposed work statement

January 5, 1966

Enclosure (a) Revised Proposed Level of Effort

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	Contract	
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- 1.- Principal Associate: Mechanical Engineer skilled in instrumentation development and photo equipment mechanics. 400 hours.
- 1.- Principal Associate: Physicist skilled in instrumentation development and electronics. 480 hours.
- 1.- Senior Associate: Mechanical Engineer skilled in mathematical analysis and computer programming and usage. 400 hours.
- 2.- Senior Designers: Skilled in instrument mechanism design and drafting. 800 hours.

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Approved For Release 2005/06/23 : CIA-RDP78B04770A002900010003-8

January 5, 1966

Enclosure (b) Revised Proposed Work for Proposed Task III
"Analysis and Test of Viewing and Mensuration
Equipment"
Contract No.

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Item 1. Analysis and Test of Existing Viewer

Analyze the design and test the operation of an existing customer furnished viewer to develop procedures, measuring devices and standards. The following factors are typical of the aspects to be covered:

(a) Examine film transport for speed, smoothness, accuracy and tracking.

- (1) Review soundness of design approach
- (2) Determine suitability of available test films and procure samples for tests.
- (3) Design and procure samples of special test films where necessary for special tests.
- (4) Determine range and least count of test instruments needed.
- (5) Make an error analysis of smoothness determination and where feasible make a power spectrum analysis of velocity.

(b) Establish a review check list for such items as:

- (1) Loading and loading diagrams
- (2) Controls and markings
- (3) Circuit diagrams
- (4) Circuit breakers
- (5) High voltage interlocks
- (6) Roller alignment and bearing sticking
- (7) Personnel safety considerations

(c) Review basic principles of structure design for:

- (1) Sound geometry
- (2) Good joints
- (3) Properly sized and braced members
- (4) Good structural damping
- (5) Adequate, well designed doors and access panels.
- (6) Operating vibration levels
- (7) Operating sound level

Enclosure (b) (Continued)

(d) Examine and test illumination and optics for:

- (1) Magnification
- (2) Distortion
- (3) Brightness distribution
- (4) Brightness levels

Item 2. "Analysis and Test of Additional Equipments"

Analyze the design and test the operation of such customer furnished equipment as is designated from time to time by the Technical Representative of the Contracting Officer. Effort will be directed toward establishing procedures, instructions, and specifying test equipment on first article tests so that customer or contractor technicians can readily test following production items.

Authorization is granted to use the customer furnished clean room facility located at [redacted] at no charge to this contract for testing of major pieces of equipment under items 1 and 2.

A time and material subcontract to [redacted] is authorized for shop technician labor to assist in conducting above tests at a rate not to exceed [redacted] per hour, for approximately 240 hours for a not to exceed total of [redacted]

Item 3. "Explore New Mechanism and Control Concepts"

Make engineering analysis, fundamental designs and breadboard tests of new mechanism and control concepts for viewing and measurement equipment such as:

- (a) Automatic Threading
- (b) Automatic frame location
- (c) Application to exploitation equipment of automatic data block reading devices.
- (d) Establishment of standardized design criteria for basic common components to promote interchangeability rigidity and reliability.
- (e) Air platen of low noise and high stability
- (f) More widespread application of liquid gate or liquid bath film cleaner.

Enclosure (b) (Continued)**Item 4 "Structure Analysis and Vibration Control"**

Prepare analytical and test procedures, computation techniques and test instrument requirements for:

- (a) Amplitude criteria
- (b) Resonance and propagation
- (c) Damping
- (d) Vibration isolation
- (e) Transmissibility envelope
- (f) Power spectrum

Item 5 "Viewer Illumination Standards"

(a) Review standards and formulate procedures for test and for aiding in improvement of precision of specifications.

(b) Review illumination measuring equipment for usage, range and least count and evaluate applicability to viewing and measurement equipment.

(c) Review the design procedures and performance criteria for lamp, condenser and projection lens for potential improvement in performance.

The work of Item 5 and Item 1 (d) will be performed jointly by [redacted]

[redacted] A time and material subcontract to [redacted]
[redacted] is authorized for approximately 120
hours of professional services at a rate not to exceed
[redacted]

Item 6 "Computer/Viewer Augmentation"

Explore the feasibility of augmenting the role of the computer in relation to the projection viewer as an aid to the interpreter.

(a) Review availability and applicability of small special purpose computers to viewing and measurement equipment with particular regard to economics and simplified programming.

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Item 7 "Film Distortion and Format Temperature Study"

(a) Heat Balance Analysis: Make literature search, analysis and, as necessary make measurements of film constants such as:

- Heat capacity
- Conductivity
- Emissivity
- Surface convection

for various transmission/absorption conditions.

(b) Design and conduct tests for measurement of film temperature at the film gate for various illumination conditions, consider and compare several approaches such as:

- Calorimeter
- Thermocouple
- Temperature sensitive paints
- Strain gage

(c) Film dimensional distortion changes: Review utility of available data for determining dimensional changes of film as a function of:

- Tension
- Temperature
- Humidity
- Processing history
- Storage history

Design a test program as necessary in order to separate the elastic and inelastic changes.

(d) Grain size: Review utility of available data to determine effect of grain size on mensuration least count.